Attorney Docket No.: 2876 (203-3345)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants:	Schechter et al.	Examiner:	Alex B. Toy
Serial No.:	10/712,486	Group:	Art Unit 3739
Filed:	November 13, 2003	Dated:	January 7, 2008

For: **COMPRESSIBLE JAW CONFIGURATION WITH BIPOLAR RF OUTPUT ELECTRODES FOR SOFT TISSUE FUSION**

Mail Stop: Appeal Brief - Patents
Honorable Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

This Appeal Brief is an appeal from the Final Rejection, dated May 7, 2007, for the above-identified patent application.

I. REAL PARTY IN INTEREST

The real party in interest for this application is Tyco Healthcare Group LP, having a principal office at 195 McDermott Road; North Haven, Connecticut 06473.[1]

[1] Valleylab and Tyco Healthcare Group LP are now owned by Covidien having a principal place of business at 195 McDermott Road; North Haven, Connecticut 06473

II. RELATED APPEALS AND INTERFERENCES

There are no other related prior or pending appeals or interferences for this application.

III. STATUS OF CLAIMS

The status of the claims of this application is as follows:

A) Claims 1-5, 7, 8, and 21-23 are pending;

B) Claims 6, 9-20 have been withdrawn; and

C) Claims 1-5, 7, 8, and 21-23 have been rejected and are hereby appealed.

IV. STATUS OF AMENDMENTS

An Amendment After the Final Rejection mailed on May 7, 2007 was filed on July 16, 2007. As of the filing of this Appeal, the U.S. Patent and Trademark Office has not issued any response to Appellants' Amendment After the Final Rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent Claim 1 discloses a tissue or vessel sealing instrument 14 including a housing 22 and an end effector assembly 100 (page 11, lines 8-16; Figure 1). The housing 22 includes a shaft 32 attached thereto. The end effector assembly 100 is attached to a distal end 34 of the shaft 32 and includes first and second jaw members 110, 120 attached thereto and made from a substantially rigid material (page 13, lines 5-7). The jaw members 110, 120 are movable relative to one another from a first position for situating or approximating tissue between the jaw members to at least one additional position for grasping tissue therebetween (page 12, lines 1-7). Each of the jaw members 110, 120 includes an elastomeric material 114, 124 disposed on an inner facing tissue contacting surface 115, 125 thereof. Each of the elastomeric materials 114,

124 includes an electrode 116, 126 disposed therein (page 13, lines 12-21; Figures 2-7). The electrodes 116, 126 are offset a distance "X" relative to one another such that when the jaw members 110, 120 are closed about the tissue and when the electrodes 116, 126 are activated, electrosurgical energy flows through the tissue in a generally coplanar manner relative to the tissue contacting surfaces 115, 125 (page 15, lines 6-16; Figures 2-5). The elastomeric material 114, 124 is adapted to compress or deflect about 0.001 inches to about 0.015 inches when the force used to close the jaw members 110, 120 is between about 40 psi and about 230 psi. (page 18, lines 17-21). The substantially rigid material of the jaw members 110, 120 resists deformation when the force used to close the jaw members 110, 120 is between about 40 psi to about 230 psi. (page 13, lines 5-7).

In various embodiments, the elastomeric material is selected from the group consisting of at least one of the following materials: silicone, polyurethane, santoprene, nylon, syndiotactic polystryrene, Polybutylene Terephthalate (PBT), Polycarbonate (PC), Acrylonitrile Butadiene Styrene (ABS), Polyphthalamide (PPA), Polymide, Polyethylene Terephthalate (PET), Polyamide-imide (PAI), Acrylic (PMMA), Polystyrene (PS and HIPS), Polyether Sulfone (PES), Aliphatic Polyketone, Acetal (POM) Copolymer, Polyurethane (PU and TPU), Nylon with Polyphenylene-oxide dispersion and Acrylonitrile Styrene Acrylate (page 14, lines 5-15).

In disclosed configurations, the offset distance "X" is in the range of about 0.005 inches to about 0.200 inches (page 15, lines 10-15). Embodiments also include at least one sensor 145, 155 which provides information to a feedback circuit for regulating the electrosurgical energy through the tissue. Here, in disclosed embodiments, the sensor 145, 155 measures at least one of tissue impedance, tissue temperature and tissue thickness (page 20, lines 14-22; Figure 2).

In various embodiments, at least one of the jaw members 110, 120 includes at least one electrode 116, 126 across its width and the electrosurgical instrument includes means for

selecting one of the electrodes for electrically opposing the electrode disposed on the other of the jaw members. Here, the means includes a sensor which measures at least one of tissue impedance, tissue temperature and tissue thickness (page 21, lines 3-7).

In disclosed embodiments, the elastomeric material has a comparative tracking index value of about 300 to about 600 volts (page 14, lines 1-4).

Independent Claim 21 discloses a tissue or vessel sealing instrument 14 including a housing 22 having a shaft 32 attached thereto and an end effector assembly 100 attached to a distal end 34 of the shaft 32 (page 11, lines 8-16; Figure 1). The end effector assembly 100 includes first and second jaw members 110, 120 attached thereto made from a substantially rigid material (page 13, lines 5-7). The jaw members 110, 120 are movable relative to one another from a first position for approximating tissue to at least one additional position for grasping tissue therebetween (page 12, lines 1-7). Each of the jaw members 110, 120 includes an elastomeric material 114, 124 disposed on an inner facing tissue contacting surface 115, 125 thereof. Each of the elastomeric materials 114, 124 includes an electrode 116, 126 disposed therein (page 13, lines 12-21; Figures 2-7) and the electrodes 116, 126 are offset a distance "X" relative to one another such that when the jaw members 110, 120 are closed about the tissue and when the electrodes 116, 126 are activated, electrosurgical energy flows through the tissue in a generally coplanar manner relative to the tissue contacting surfaces 115, 125 (page 15, lines 6-16; Figures 2-5).

The elastomeric material 114, 124 is selected from the group consisting of at least one of the following materials: silicone, polyurethane, santoprene, nylon, syndiotactic polystryrene, Polybutylene Terephthalate (PBT), Polyphthalamide (PPA), Polymide, Polyethylene Terephthalate (PET), Polyamide-imide (PAI), Acrylic (PMMA), Polystyrene (PS and HIPS), Polyether Sulfone (PES), Aliphatic Polyketone, Acetal (POM) Copolymer, Polyurethane (PU

and TPU), Nylon with Polyphenylene-oxide dispersion and Acrylonitrile Styrene Acrylate (page 14, lines 5-15). The elastomeric material 114, 124 is adapted to compress or deflect about 0.001 inches to about 0.015 inches when the force used to close the jaw members 110, 120 is between about 40 psi to about 230 psi. (page 18, lines 17-21). The substantially rigid material of the jaw members 110, 120 resists deformation when the force used to close the jaw members is between about 40 psi to about 230 psi. (page 13, lines 5-7).

Independent Claim 22 recites a tissue or vessel sealing instrument 14 including a housing 22 having a shaft 32 attached thereto and an end effector assembly 100 attached to a distal end 34 of the shaft 32 (page 11, lines 8-16; Figure 1). The end effector assembly 100 includes first and second jaw members 110, 120 attached thereto made from a substantially rigid material (page 13, lines 5-7). The jaw members 110, 120 are movable relative to one another from a first position for approximating tissue to at least one additional position for grasping tissue therebetween (page 12, lines 1-7). Each of the jaw members 110, 120 includes an elastomeric material 114, 124 disposed on an inner facing tissue contacting surface 115, 125 thereof (Figures 2-7). The elastomeric material 114, 124 is adapted to compress or deflect about 0.001 inches to about 0.015 inches when the force used to close the jaw members is between about 40 psi to about 230 psi. (page 18, lines 17-21). Each of the elastomeric materials 114, 124 includes an electrode 116, 126 disposed therein and the electrodes 116, 126 are offset a distance "X" relative to one another such that when the jaw members are closed about the tissue and when the electrodes are activated, electrosurgical energy flows through the tissue in a generally coplanar manner relative to the tissue contacting surfaces 115, 125 (page 15, lines 6-16; Figures 2-5). The offset distance "X" is in the range of about 0.005 inches to about 0.200 inches (page 15, lines 10-15). The substantially rigid material of the jaw members 110, 120 resists deformation when the force used to close the jaw members is between about 40 psi to about 230 psi. (page 13, lines 5-

7).

Independent Claim 23 recites a tissue or vessel sealing instrument 14 that includes a housing 22 having a shaft 32 attached thereto and an end effector 100 assembly attached to a distal end 34 of the shaft 32 (page 11, lines 8-16; Figure 1). The end effector assembly 100 includes first and second jaw members 110, 120 attached thereto made from a substantially rigid material (page 13, lines 5-7). The jaw members 110, 120 are movable relative to one another from a first position for approximating tissue to at least one additional position for grasping tissue therebetween (page 12, lines 1-7). Each of the jaw members 110, 120 includes an elastomeric material 114, 124 disposed on an inner facing tissue contacting surface 115, 125 thereof and each of the elastomeric materials 114, 124 includes an electrode 116, 126 disposed therein (page 13, lines 12-21; Figures 2-7). The electrodes 116, 126 are offset a distance "X" relative to one another such that when the jaw members are closed about the tissue and when the electrodes 116, 126 are activated, electrosurgical energy flows through the tissue in a generally coplanar manner relative to the tissue contacting surfaces 115, 125 (page 15, lines 6-16; Figures 2-5). The distance "X" is variable depending on the thickness of the tissue between the jaw members 110, 120 (page 20, line 22 – page 21, line 7). The elastomeric material 114, 124 is adapted to compress or deflect about 0.001 inches to about 0.015 inches when the force used to close the jaw members 110, 120 is between about 40 psi to about 230 psi. (page 18, lines 17-21). The substantially rigid material of the jaw members 110, 120 resists deformation when the force used to close the jaw members 110, 120 is between about 40 psi to about 230 psi. (page 13, lines 5-7).

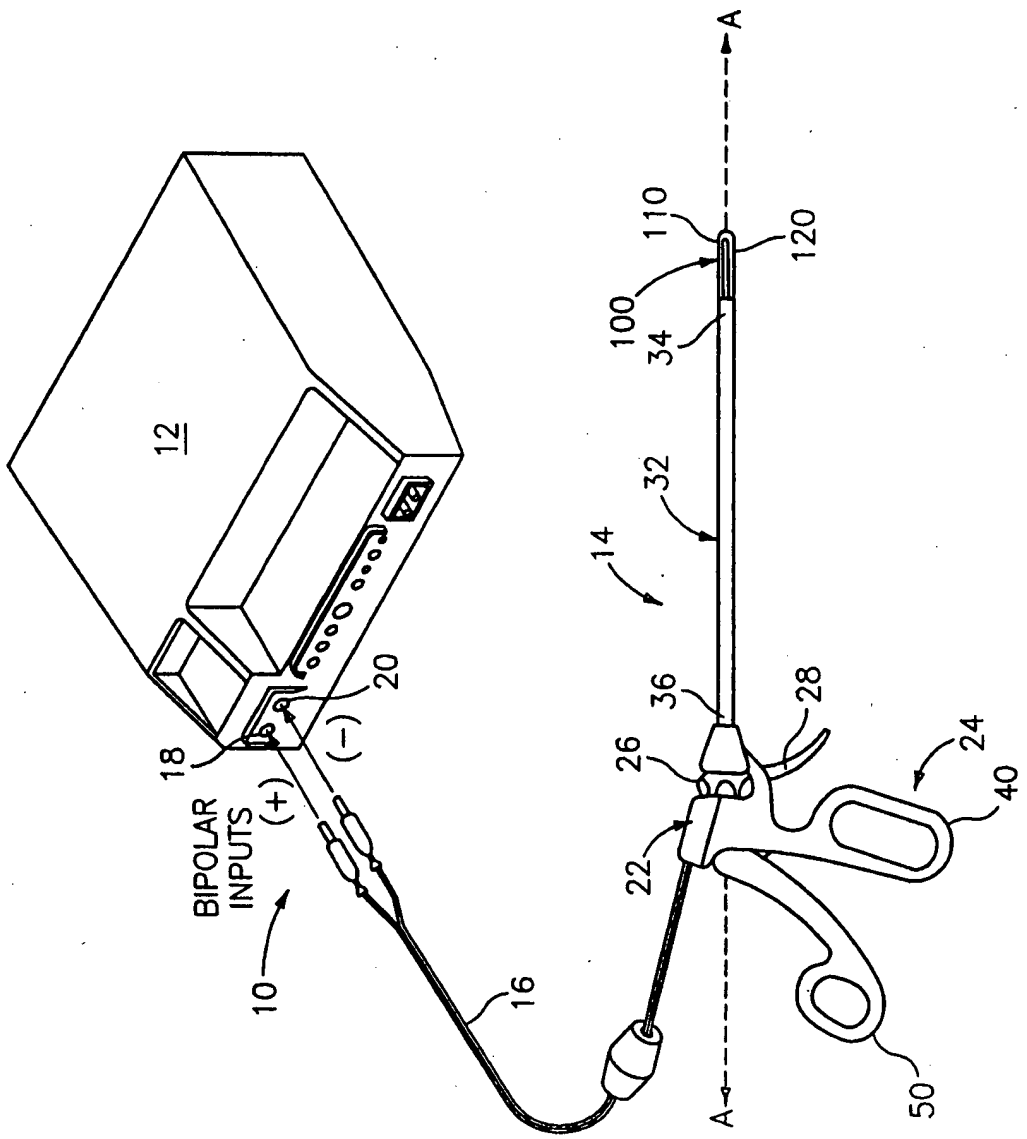

12
BIPOLAR INPUTS
(+)
(−)
10
18
20
16
14
32
34
100
110
120
36
26
28
22
24
40
50
A
A

FIG. 1

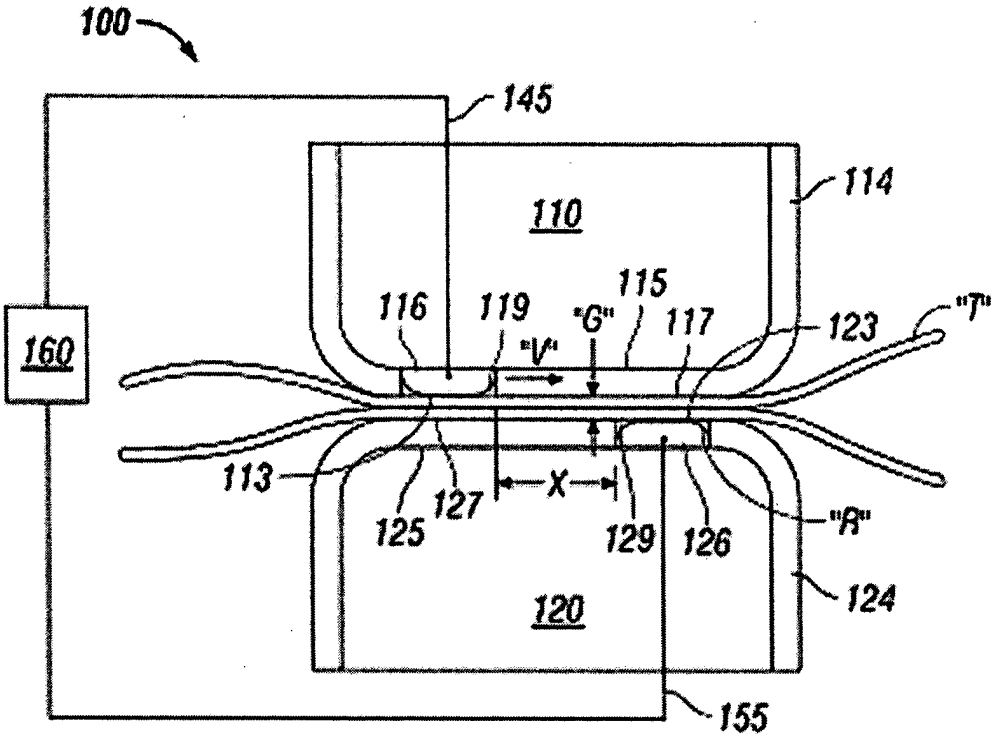

100
145
114
110
115
116
119
"G"
117
123
"T"
160
"V"
113
125
127
X
129
126
"R"
124
120
155

FIG. 2

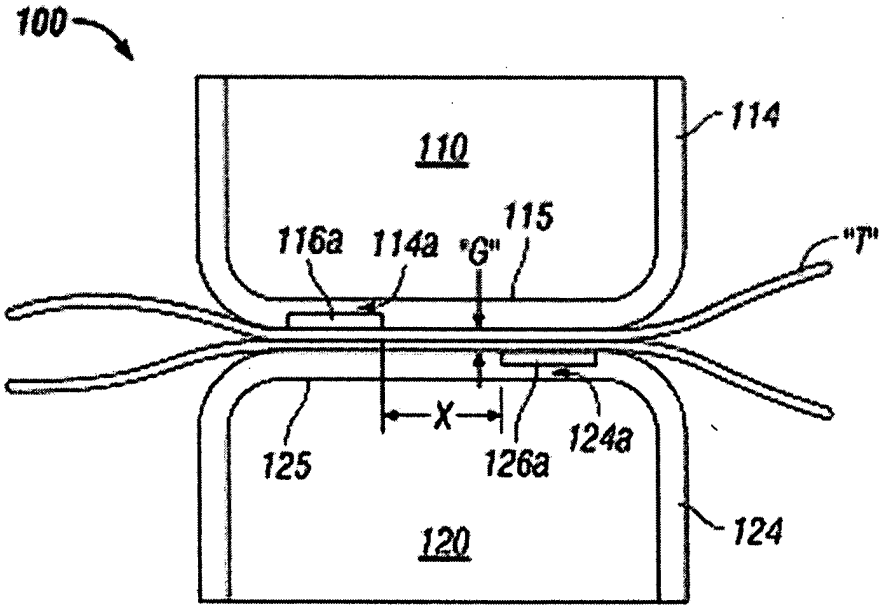

100
114
110
115
116a
114a
"G"
"T"
125
X
126a
124a
124
120

FIG. 3

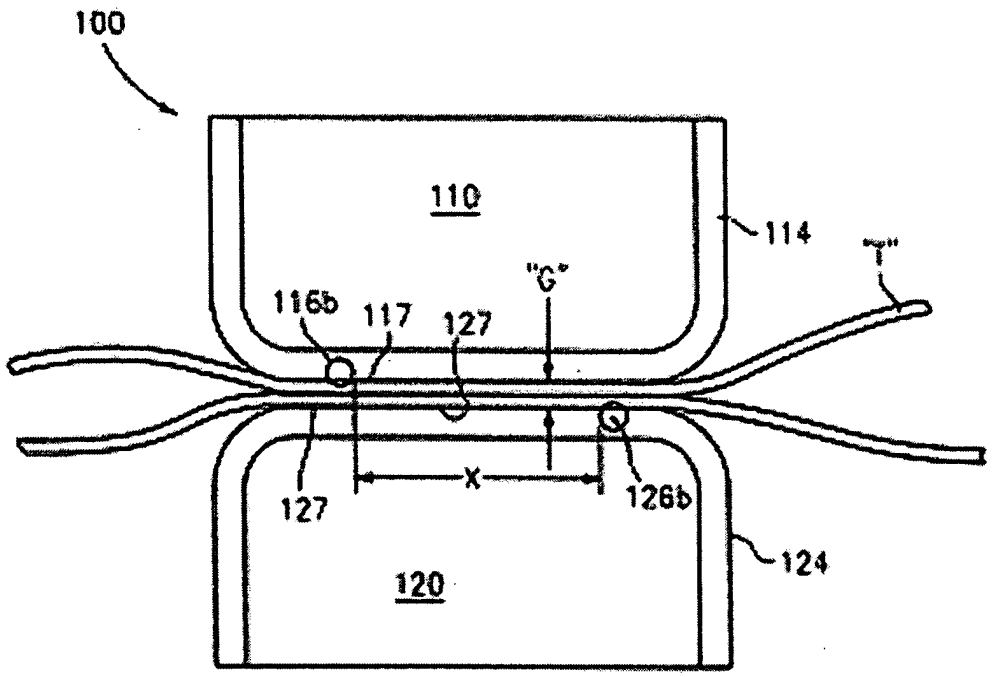

100
110
114
"T"
"G"
116b
117
127
127
X
126b
124
120

FIG. 4

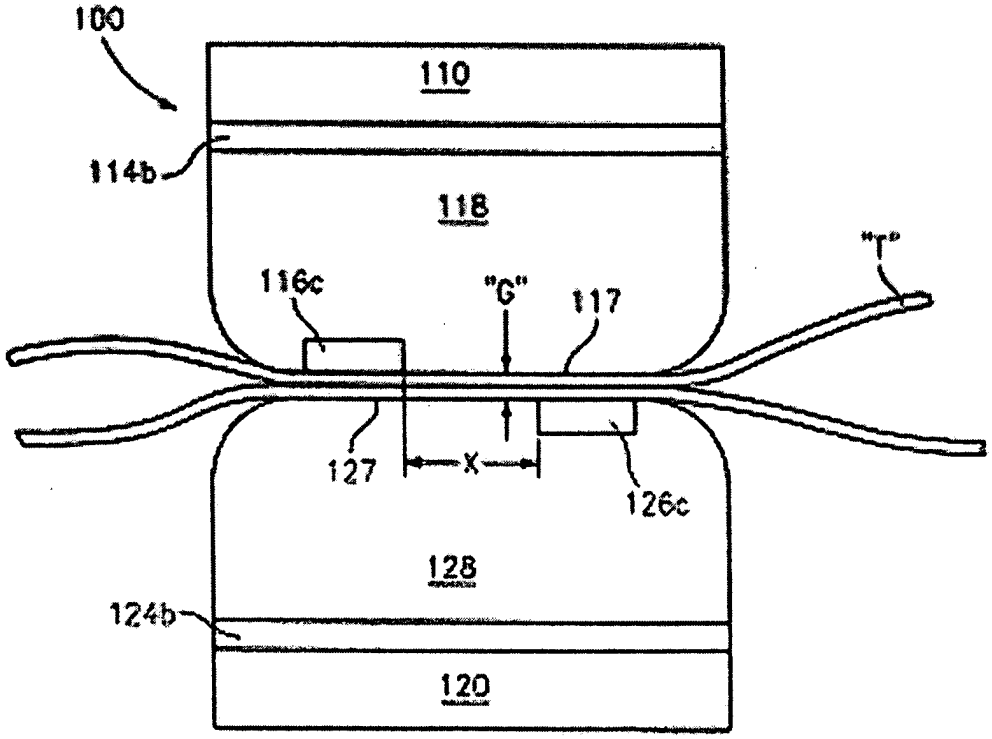

100
110
114b
118
"T"
116c
"G"
117
127
X
126c
128
124b
120

FIG. 5

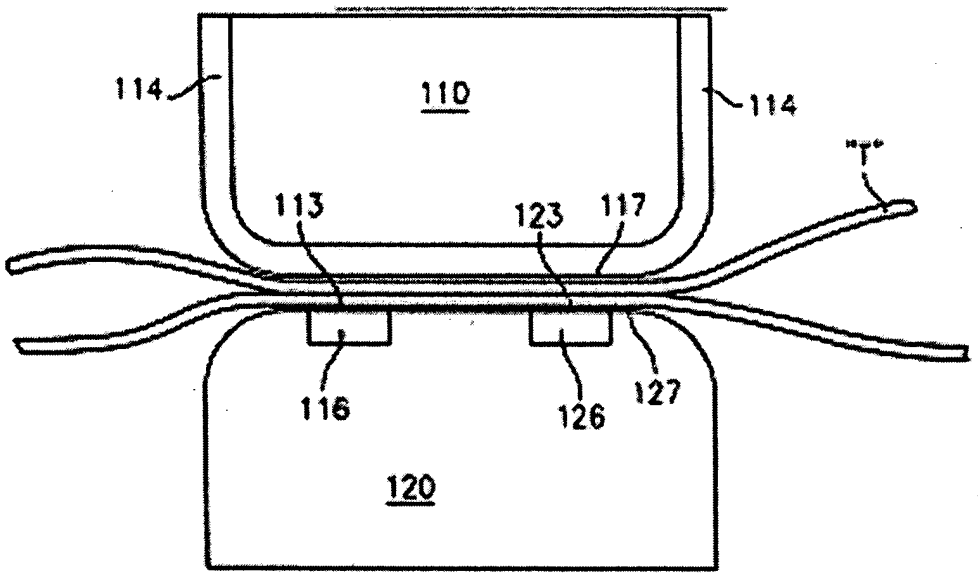

114
110
114
"T"
113
123
117
116
126
127
120

FIG. 6

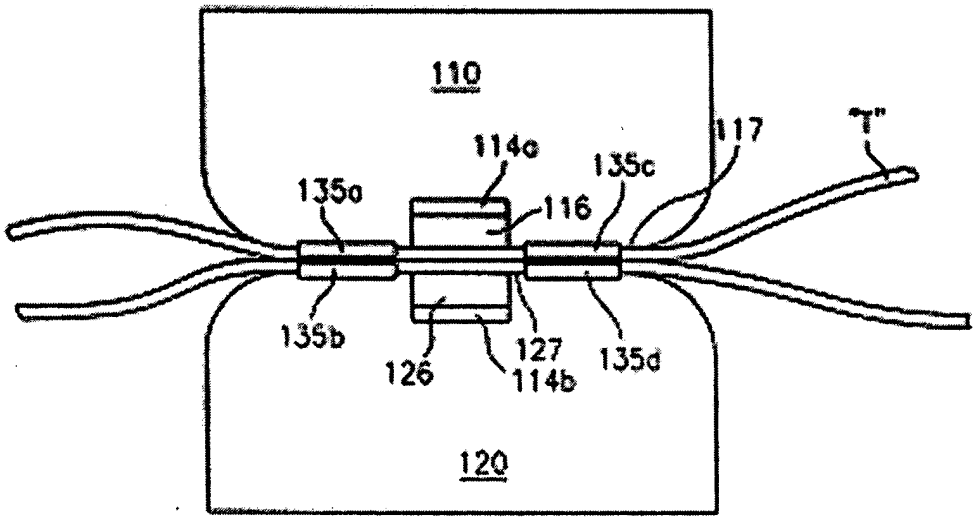

110
114a
135c
117
"T"
135a
116
135b
126
127
114b
135d
120

FIG. 7

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellants request review of the following outstanding grounds of rejection:

A) The rejection of Claims 1-5, 7-8 and 21-23 under 35 U.S.C. §103(a) over U.S. Patent No. 6,932,816 to Phan ("Phan") in view of U.S. Patent No. 6,086,586 to Hooven ("Hooven").

VII. ARGUMENT

A) The rejection of Claims 1-5, 7-8 and 21-23 under 35 U.S.C. §103(a) over Phan in view of Hooven.

Claims 1-5, 7-8 and 21-23 stand rejected over U.S. Patent No. 6,932,816 to Phan ("Phan") in view of U.S. Patent No. 6,086,586 to Hooven ("Hooven"). Phan relates to an apparatus for converting a clamp into an electrophysiology device. Hooven discloses a bipolar tissue grasping apparatus and tissue welding method.

Independent Claims 1 and 21-23 each require a tissue or vessel sealing instrument, comprising, *inter alia*, jaw members including an elastomeric material disposed on an inner facing tissue contacting surface. In the Office Action mailed on December 7, 2006, it was asserted that a base member 106 of Phan is an elastomeric material disposed on an inner facing tissue contacting surface. However, the "elastomeric material" of Phan is not disposed on an **inner facing tissue contacting** surface.

In the Office Action mailed on May 7, 2007, it was asserted that Phan discloses a tissue or vessel sealing instrument, comprising, *inter alia*, first and second jaw members each "including an elastomeric material 106 disposed on an inner facing tissue contacting surface thereof" and "each of the elastomeric materials including an electrode 108 disposed therein, the elastomeric material being adapted to compress or deflect about 0.001 inches to about 0.015

inches when the force used to close the jaw members is between about 40 psi to about 230 psi."

Specifically, "the Examiner maintains that a large portion of elastomeric base member 106 is disposed on an inner facing tissue contacting surface of each jaw member." Additionally, it is contended that FIG. 8 of Phan "clearly shows that elastomeric base member 106 encompasses the electrode 108 and forms a large surface area surrounding the electrode that contacts tissue on the inner surface of each jaw member."

In making this assertion, the Examiner refers to Figs. 7a and 8 of Phan and indicates that the elastomeric base member 106 *encompasses* the electrode 108. Additionally, it is asserted that the elastomeric base member 106 forms a large surface area *surrounding* the electrode that contacts tissue on the inner surface of each jaw member.

Upon a detailed review of Figs. 7a, 7b and 8 of Phan, reproduced below, it is evident that the Examiner's assertion is incorrect. In particular, the Examiner has mistakenly asserted that the elastomeric base member 106 of Phan is disposed on an inner facing tissue contacting surface of each jaw member, as required by the Appellants' claims. As shown in Figs. 7a, 7b and 8, reproduced below, the elastomeric base member 106 of Phan is not disposed on a tissue contacting surface of the jaw member. Rather, the electrode 108 of Phan (vis-à-vis its base member 106) is disposed on a tissue contacting surface, as tissue is clamped between the lower surface of the energy transmission assembly 102 of Fig. 7a and the upper surface of the energy transmission assembly 104 of Fig. 7b. Since the base member 106 does not contact tissue when tissue is grasped by the clamp 10, the base member cannot be interpreted as being disposed on a tissue contacting surface.

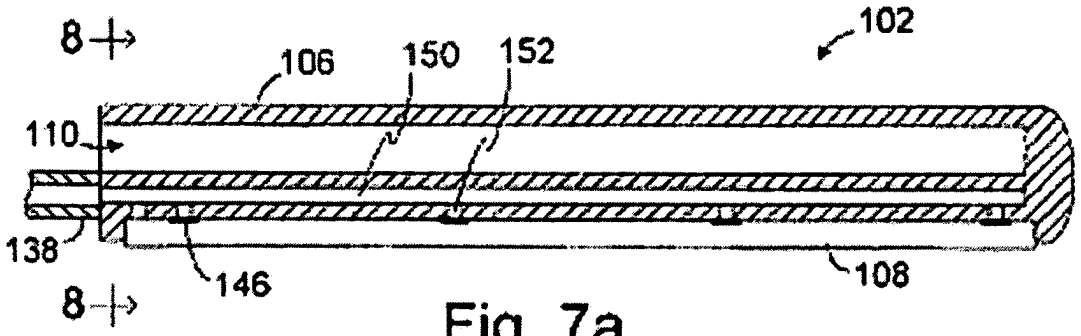


Fig. 7a

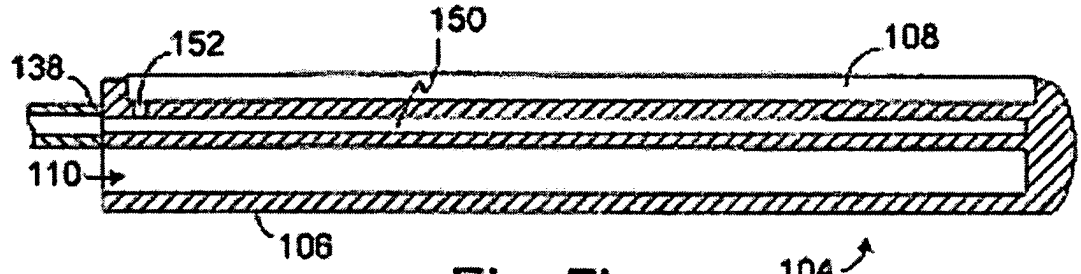
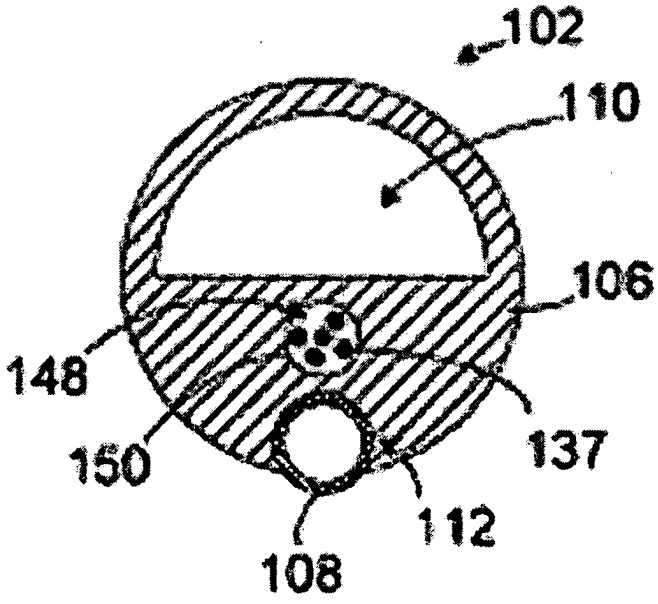


Fig. 7b

Fig. 8



In contrast, Fig. 3 (for example) of Appellants' disclosure, reproduced below, illustrates the elastomeric materials 114 and 124 contacting tissue "T" and thus being disposed on a tissue contacting surface.

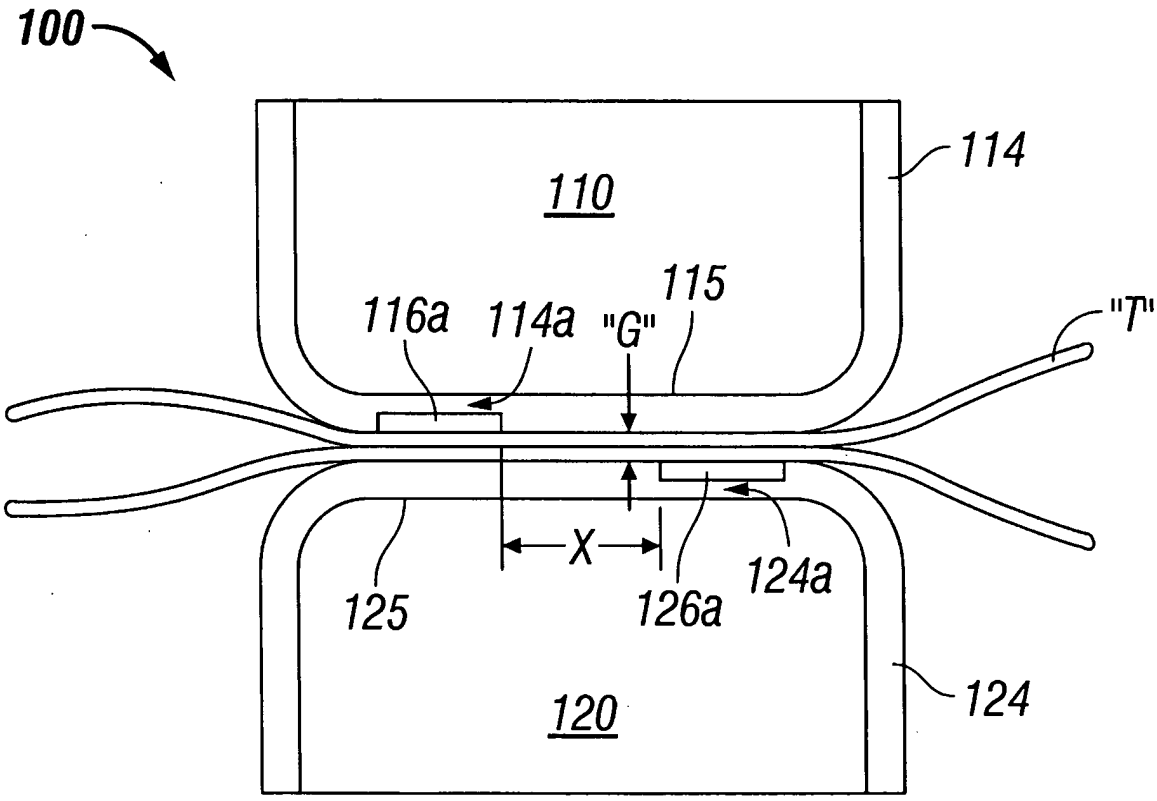


FIG. 3

Additionally, the base member 106 of Phan, does not *encompass* the electrode 108 (see Fig. 8 of Phan, above), as asserted by the Examiner. That is, the elastomeric base member 106 does not "form a circle or ring around," or "surround" the electrode 108.[2] Further, the

[2] *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2006 by Houghton Mifflin Company.*

elastomeric base member 106 does not form a large surface area *surrounding* the electrode. By contrast, reference number 108 is referring to the energy transmission device that is illustrated by the hatched ring around and in conjunction with the non-hatched circle. Thus, it is clear that the elastomeric base member 106 does not encompass or surround the electrode 108. Rather, the elastomeric base member 106 of Phan is adjacent the electrode 108.

Therefore, while the electrode 108 of Phan may be disposed on a tissue contacting surface, it is clear that the elastomeric base member 106 of Phan is not disposed on a tissue contacting surface, as required by the claims of Appellants' disclosure. If the base member 106 were encompassing the electrode 108, the base member may be on a tissue contacting surface. However, such a feature is not taught by Phan. Additionally, Hooven fails to cure this deficiency. Thus, the combination of Phan and Hooven fails to disclose, either alone or in combination, the limitations required by independent Claims 1 and 21-23.

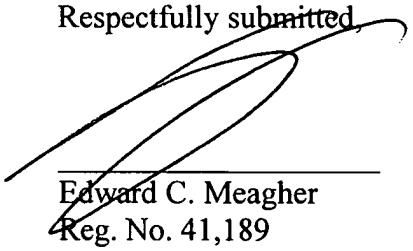
Thus, for at least the foregoing reasons, Phan and Hooven, taken alone or in combination, fail to disclose, teach or otherwise suggest the apparatus of independent Claims 1 or 21-23. Accordingly, withdrawal of this rejection is respectfully requested and Appellants earnestly seek allowance of Claims 1 and 21-23, and Claims 2-5 and 7-8, which depend from Claim 1.

CONCLUSION

In view of the foregoing remarks, Appellants respectfully submit that all of the claims now pending (and not withdrawn) in this application, namely, Claims 1-5, 7, 8, and 21-23 are in condition for allowance. Early and favorable reconsideration of this application is respectfully requested.

Please charge any deficiency as well as any other fee(s) which may become due under 37 C.F.R. §1.16 and/or 1.17 at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account No. 21-0550. Also, in the event any extensions of time for responding are required for the pending application(s), please treat this paper as a petition to extend the time as required and charge Deposit Account No. 21-0550 therefor.

Respectfully submitted,



Edward C. Meagher
Reg. No. 41,189
Attorney for Appellants

Mailing Address:
COVIDIEN
60 Middletown Avenue
North Haven, CT 06473
(303) 581-6831

VIII. APPENDIX OF CLAIMS

1. A tissue or vessel sealing instrument, comprising:

a housing having a shaft attached thereto; and

an end effector assembly attached to a distal end of the shaft, the end effector assembly including first and second jaw members attached thereto made from a substantially rigid material, the jaw members being movable relative to one another from a first position for approximating tissue to at least one additional position for grasping tissue therebetween;

each of the jaw members including an elastomeric material disposed on an inner facing tissue contacting surface thereof, each of the elastomeric materials including an electrode disposed therein, the electrodes being offset a distance X relative to one another such that when the jaw members are closed about the tissue and when the electrodes are activated, electrosurgical energy flows through the tissue in a generally coplanar manner relative to the tissue contacting surfaces, the elastomeric material being adapted to compress or deflect about 0.001 inches to about 0.015 inches when the force used to close the jaw members is between about 40 psi to about 230 psi; and

wherein the substantially rigid material of the jaw members resists deformation when the force used to close the jaw members is between about 40 psi to about 230 psi.

2. The tissue or vessel sealing instrument of claim 1, wherein the elastomeric material is selected from the group consisting of at least one of the following materials: silicone, polyurethane, santoprene, nylon, syndiotactic polystryrene, Polybutylene Terephthalate (PBT), Polycarbonate (PC), Acrylonitrile Butadiene Styrene (ABS), Polyphthalamide (PPA), Polymide, Polyethylene Terephthalate (PET), Polyamide-imide (PAI), Acrylic (PMMA), Polystyrene (PS

and HIPS), Polyether Sulfone (PES), Aliphatic Polyketone, Acetal (POM) Copolymer, Polyurethane (PU and TPU), Nylon with Polyphenylene-oxide dispersion and Acrylonitrile Styrene Acrylate.

3. The tissue or vessel sealing instrument of claim 1, wherein the offset distance X is in the range of about 0.005 inches to about 0.200 inches.

4. The tissue or vessel sealing instrument of claim 1, further comprising at least one sensor which provides information to a feedback circuit for regulating the electrosurgical energy through the tissue.

5. The tissue or vessel sealing instrument of claim 4, wherein the sensor measures at least one of tissue impedance, tissue temperature and tissue thickness.

6. (Withdrawn) The electrosurgical instrument of claim 1, wherein at least one of the jaw members includes means for regulating the distance X dependent upon tissue thickness or tissue type.

7. The tissue or vessel sealing instrument of claim 1, wherein at least one of the jaw members includes at least one electrode across the width thereof and the electrosurgical instrument includes means for selecting one of the electrodes for electrically opposing the electrode disposed on the other of the jaw members, wherein the means includes a sensor which measures at least one of tissue impedance, tissue temperature and tissue thickness.

8. The tissue or vessel sealing instrument of claim 1, wherein the elastomeric material has a comparative tracking index value of about 300 to about 600 volts.

9. (Withdrawn) The electrosurgical instrument of claim 1, wherein the electrodes are wire electrodes which project from the tissue contacting surfaces of the elastomeric material into contact with the tissue.

10. (Withdrawn) The electrosurgical instrument of claim 1, wherein the elastomeric material on each of the jaw members includes an electrode which is partially disposed therein.

11. (Withdrawn) The electrosurgical instrument of claim 10, wherein upon grasping of tissue between the jaw members, each of the electrodes deflect inwardly relative to the tissue contacting surfaces.

12. (Withdrawn) The electrosurgical instrument of claim 11, wherein the electrodes are recessed within the elastomeric material.

13. (Withdrawn) The electrosurgical instrument of claim 12, wherein the tissue contacting surface of each electrode is substantially crowned.

14. (Withdrawn) An electrosurgical instrument for sealing tissue, comprising:

a housing having a shaft attached thereto; and

an end effector assembly attached to a distal end of the shaft, the end effector assembly including first and second jaw members attached thereto, the jaw members

being movable relative to one another from a first position for approximating tissue to at least one additional position for grasping tissue therebetween;

each of the jaw members including an insulative material disposed on an inner facing tissue contacting surface thereof and an elastomeric material disposed between each jaw member and a respective insulative material, each of the insulative materials includes an electrode disposed therein, the electrodes being offset a distance X relative to one another such that when the jaw members are closed about the tissue and when the electrodes are activated, electrosurgical energy flows through the tissue in a generally coplanar manner relative to the tissue contacting surfaces.

15. (Withdrawn) The electrosurgical instrument of claim 14, wherein the offset distance X is in the range of about 0.005 inches to about 0.200 inches.

16. (Withdrawn) The electrosurgical instrument of claim 14, further comprising at least one sensor which provides information to a feedback circuit for regulating the electrosurgical energy through the tissue.

17. (Withdrawn) The electrosurgical instrument of claim 16, wherein the sensor measures at least one of tissue impedance, tissue temperature and tissue thickness.

18. (Withdrawn) The electrosurgical instrument of claim 14, wherein at least one of the jaw members includes a plurality of electrodes across the width thereof and the electrosurgical instrument includes means for selecting one of the plurality of electrodes for electrically opposing the electrode disposed on the other of the jaw members, wherein the means includes a

sensor which measures at least one of tissue impedance, tissue temperature and tissue thickness.

19. (Withdrawn) The electrosurgical instrument of claim 14, wherein the insulative material on each of the jaw members includes an electrode which is partially disposed therein.

20. (Withdrawn) The electrosurgical instrument of claim 19, wherein the electrodes are recessed within the insulative material.

21. A tissue or vessel sealing instrument, comprising:

a housing having a shaft attached thereto; and

an end effector assembly attached to a distal end of the shaft, the end effector assembly including first and second jaw members attached thereto made from a substantially rigid material, the jaw members being movable relative to one another from a first position for approximating tissue to at least one additional position for grasping tissue therebetween;

each of the jaw members including an elastomeric material disposed on an inner facing tissue contacting surface thereof, each of the elastomeric materials including an electrode disposed therein, the electrodes being offset a distance X relative to one another such that when the jaw members are closed about the tissue and when the electrodes are activated, electrosurgical energy flows through the tissue in a generally coplanar manner relative to the tissue contacting surfaces, wherein the elastomeric material is selected from the group consisting of at least one of the following materials: silicone, polyurethane, santoprene, nylon, syndiotactic polystryrene, Polybutylene Terephthalate (PBT), Polyphthalamide (PPA), Polymide, Polyethylene Terephthalate (PET),

Polyamide-imide (PAI), Acrylic (PMMA), Polystyrene (PS and HIPS), Polyether Sulfone (PES), Aliphatic Polyketone, Acetal (POM) Copolymer, Polyurethane (PU and TPU), Nylon with Polyphenylene-oxide dispersion and Acrylonitrile Styrene Acrylate, the elastomeric material being adapted to compress or deflect about 0.001 inches to about 0.015 inches when the force used to close the jaw members is between about 40 psi to about 230 psi; and

wherein the substantially rigid material of the jaw members resists deformation when the force used to close the jaw members is between about 40 psi to about 230 psi.

22. A tissue or vessel sealing instrument, comprising:

a housing having a shaft attached thereto; and

an end effector assembly attached to a distal end of the shaft, the end effector assembly including first and second jaw members attached thereto made from a substantially rigid material, the jaw members being movable relative to one another from a first position for approximating tissue to at least one additional position for grasping tissue therebetween;

each of the jaw members including an elastomeric material disposed on an inner facing tissue contacting surface thereof, the elastomeric material being adapted to compress or deflect about 0.001 inches to about 0.015 inches when the force used to close the jaw members is between about 40 psi to about 230 psi, each of the elastomeric materials including an electrode disposed therein, the electrodes being offset a distance X relative to one another such that when the jaw members are closed about the tissue and when the electrodes are activated, electrosurgical energy flows through the tissue in a generally coplanar manner relative to the tissue contacting surfaces, wherein the offset

distance X is in the range of about 0.005 inches to about 0.200 inches; and

wherein the substantially rigid material of the jaw members resists deformation when the force used to close the jaw members is between about 40 psi to about 230 psi.

23. A tissue or vessel sealing instrument, comprising:

a housing having a shaft attached thereto; and

an end effector assembly attached to a distal end of the shaft, the end effector assembly including first and second jaw members attached thereto made from a substantially rigid material, the jaw members being movable relative to one another from a first position for approximating tissue to at least one additional position for grasping tissue therebetween;

each of the jaw members including an elastomeric material disposed on an inner facing tissue contacting surface thereof, each of the elastomeric materials including an electrode disposed therein, the electrodes being offset a distance X relative to one another such that when the jaw members are closed about the tissue and when the electrodes are activated, electrosurgical energy flows through the tissue in a generally coplanar manner relative to the tissue contacting surfaces, the distance X being variable depending on the thickness of the tissue between the jaw members, the elastomeric material being adapted to compress or deflect about 0.001 inches to about 0.015 inches when the force used to close the jaw members is between about 40 psi to about 230 psi; and

wherein the substantially rigid material of the jaw members resists deformation when the force used to close the jaw members is between about 40 psi to about 230 psi.

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None